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1. A thermokinetic mixer comprising:

- (a) a substantially cylindrical mixing chamber with an inside surface enclosing a shaft rotatable at relatively high speed substantially about the axis of the cylindrical mixing chamber, the mixing chamber adapted to receive particles of polymers and other material therein; and
- (b) shaft extensions removable from the shaft, the shaft extensions adapted to encounter the particles and drive them at least in part to the inside surface such that substantial energy is imparted to them.

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4. The mixer of claim 3 wherein the leading edge comprises most of a height of the shaft extensions.

5. The mixer of claim 3 wherein the shaft extensions rises from the shaft to very close to the inside surface.

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10. A thermokinetic mixer comprising:

- (a) a substantially cylindrical mixing chamber with an inside surface enclosing a shaft rotatable at relatively high speed substantially about the axis of the cylindrical mixing chamber, the mixing chamber adapted to receive particles of polymers and other material therein;
- (b) shaft extensions comprising a tooth face, each shaft extension adapted to encounter the particles and drive them at least in part to the inside surface such that substantial energy is imparted to them; and
- (c) the tooth face comprising a major face, the major face being substantially flat and oriented such that when passing through a plane including the shaft axis the major face first encounters the plane with a leading edge of the major face and the major face extends along an acute angle therefrom away from the plane.

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14. The mixer of claim 13 wherein the shaft extensions rises from the shaft to very close to the inside surface.

REMARKS